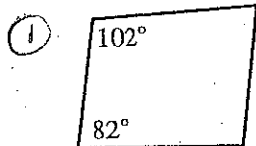
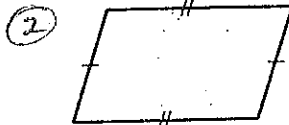
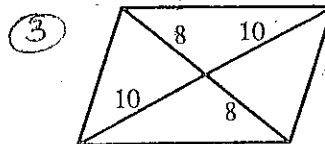


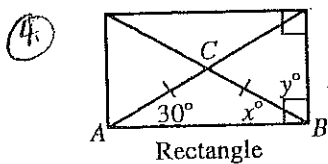
Determine whether each quadrilateral must be a parallelogram. Justify your answers.

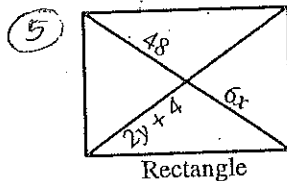


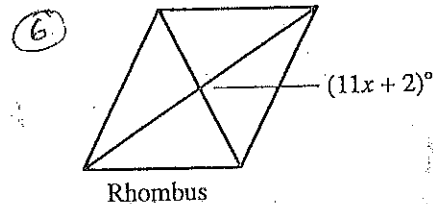




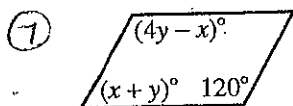
Find the values of x and y for each quadrilateral.

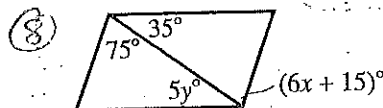




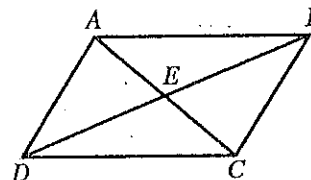


What values of x and y guarantee that each quadrilateral is a parallelogram?





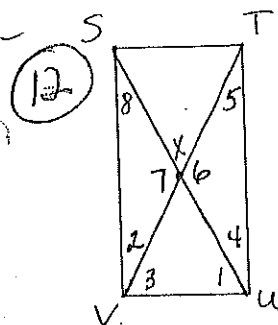
Consider the quadrilateral $ABCD$. What values of x and y will guarantee that it is a parallelogram?



⑨ $m\angle BAD = m\angle BCD = (3x)^\circ$ and $m\angle ADC = (2x)^\circ$, $x = \underline{\hspace{2cm}}$

⑩ $AB = 3x$, $CD = 2x + 4$, $BC = 7y - 2$, $AD = 4y + 7$, $x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$

⑪ $AE = 17$; $BE = 3x - 5$; $CE = 2y + 5$; $DE = 2x + 4$, $x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$



In Rectangle $STUV$, find: (Show Work)

a) $\angle 1 = 74^\circ$
 $m\angle 4 = \underline{\hspace{2cm}}$

b) $TU = 24$
 $SV = x + 6$
 $ST = y + 3$
 $VU = 18$

$x = \underline{\hspace{2cm}}$

$y = \underline{\hspace{2cm}}$

⑬ use \square STVU from #12

c) $\angle T = 24$

$x =$

$\angle U = 8y$

$y =$

$\angle V = 6 - 3x$

d) $m\angle 4 = 3x^\circ$

$m\angle 6 = 9x$

$x = ?$

e) $ST = 4x - y$

$TU = 10$

$VU = 8$

$SV = 2x + y$

$x =$

$y =$

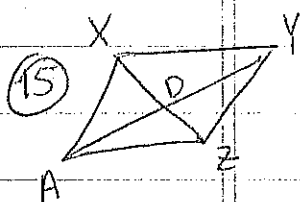
⑭ Is $\square ABCD$ a parallelogram? Is it a rectangle?

A(8, 10)

B(16, 17)

C(16, 11)

D(8, 4)



⑮ If $XYZA$ a parallelogram, $\angle XD = x^2 - 8$ & $\angle DZ = 2x$ what could x be?

⑯ Factor

a) $x^2 - 7x = -12$

b) $17x = x^2 + 42$

c) $y = 2x + 4$

$2x + 3y = 4$

⑰ In Rectangle ABCD, $AB = 10$, $AD = 4$, What is AC?

⑱ In Square AXYT, find x if $m\angle ATX = 5x + 10$

Use rhombus PQRS and the given information to find each value.

19) If $ST = 13$, find SQ .

20) If $m\angle PRS = 17$, find $m\angle QRS$.

21) Find $m\angle STR$.

22) If $SP = 4x - 3$ and $PQ = 18 + x$, find the value of x .

